Thank you for your June 27, 2017 letter urging EPA to use its technical expertise and resources to assist state and local officials to evaluate all potential present and historical sources of radioactive materials at the Northrop Grumman/US Naval Weapons Industrial Reserve Plant (the site).

As you are aware, the New York State Department of Environmental Conservation (NYSDEC) has the lead regulatory role with respect to this site. In our oversight role under the Resource Conservation and Recovery Act (RCRA), the U.S. Environmental Protection Agency (EPA) has been working closely with NYSDEC on cleanup activities at the site. Several years ago EPA initiated quarterly review meetings with the key stakeholders at the site with the goals of fostering improved coordination and communications, and expediting site cleanup. These meetings are attended by EPA, NYSDEC, NYSDOH, the Navy, Northrop Grumman and MWD, SFWD, BWD, TNHWD (check sign in sheet). The shut down of the BWD well 4-1? Due to radiological contamination has been a topic of discussion at the quarterly meetings. Consideration has been given as to whether the elevated radiological contamination in the groundwater is naturally occurring or related to operations at the site or operations at other facilities in the area.

During 2015 coordination meetings, the participating water districts requested that additional sampling of the groundwater be performed for radium. Northrop Grumman performed the additional sampling of a series of wells in 2015; the results revealed a few locations where radium was slightly above the drinking water standard; however, the results did not reveal a specific source of the radium. It is important to note that although radium is only moderately soluble in water under certain geological conditions, it can enter the groundwater system by dissolution of minerals or aquifer sediment, desorption from the surface of particles within aquifers, and other processes. According to studies by USGS, detectable radium concentrations exist within the basic soils comprising the North Atlantic Coastal Plain, which includes Long Island. Studies in New Jersey by USGS in cooperation with the New Jersey Department of Environmental Protection during the 1990's indicated that the chemistry of the water rather than the radium content of the sediment was primarily responsible for higher detections measured.

The water districts also requested and that additional data be gathered to determine whether radiological materials were used at the site during production years. As noted in your letter, in 2016 Northrop Grumman responded to a DEC request for information regarding the use of radiological materials at the site with a nine page report entitled "xxx". In that report Northrop Grumman indicates…
EPA agrees that a more definitive response should be sought from Northrop Grumman concerning its use, storage, or disposal of radiological materials at the site.

EPA has offered its assistance to NYSDEC with respect to the investigation of the radium in the groundwater (whether naturally occurring or resulting from operations) near the site. EPA staff representing the Superfund, RCRA, radiation and drinking water programs have discussed the investigation of radium in the groundwater in the vicinity of the site, as well as at the Bethpage High School Campus, potential sources of the radium, and need for additional information from Northrop Grumman regarding its use of radioactive materials at the site. NYSDEC is actively

gathering information that can be used to better define the situation at the site. NYSDEC has (1) requested additional info from Grumman (2) tested for rad contamination at xxx (3) performed radon sampling of indoor air at hs campus and intends/offered to perform its own sampling of the shallow gw at the hs campus (4) initiated inquiries regarding the use of radiological materials at xx state superfund sites in long island)…

NYSDEC will share the results of its investigations with EPA, other stakeholders and the public as it becomes available later this year. EPA will continue to coordinate with NYSDEC to better understand presence of the radium in the aquifer and any potential actions that may be required to address the radium